

THE CLAIMS

1. (Previously presented) A record control apparatus comprising:

a buffer for storing moving image data belonging to a chapter,

storage size detecting means for detecting that the moving image data stored in the buffer increases in size beyond a first size which is a size of a moving image object other than a final moving image object and then reaches a second size which is a size of a moving image object for a seamless connection,

final data detecting means for detecting that a final moving image data belonging to the chapter is stored in the buffer, and

moving image object output means for retrieving a portion of the moving image data, stored in the buffer, corresponding to the first size from the head of the moving image data, and outputting the portion of the moving image data as the moving image object if it is detected that the moving image data stored in the buffer reaches the second size over the first size, and retrieving a whole moving image data stored in the buffer and outputting the retrieved moving image data as a moving image object if it is detected that the final moving image data belonging to the chapter is stored in the buffer.

2. (Previously presented) The record control apparatus according to claim 1, wherein the storage size detecting means comprises:

size measurement means for measuring a size of the moving image data stored in the buffer,

time measurement means for measuring time by converting, into time, the size of the moving image data stored in the buffer, and

threshold detecting means for detecting that the time measurement means detects the second size after the size measurement means detects the first size.

3. (Original) The record control apparatus according to claim 2, wherein the storage size detecting means further comprises threshold holding means for holding the first size and the second size and supplying the threshold detecting means with the first size and the second size.

4. (Previously presented) The record control apparatus according to claim 3, further comprising threshold setting means for setting the first size of the moving image object as a standard size of the moving image object, and the second size of the moving image object as a lower limit value of the moving image object for the seamless connection.

5. (Original) The record control apparatus according to claim 1, wherein the moving image object output means comprises packing means for dividing the moving image data retrieved from the buffer into packs, each pack having a fixed length, and

multiplexing means for multiplexing the packed moving image data and outputting the multiplexed moving image data as the moving image object.

6. (Previously presented) An encoding system comprising:

moving image encoding means for encoding a moving image signal and outputting the encoded moving image signal as moving image data,

audio encoding means for encoding an audio signal and outputting the encoded audio signal as audio data,

a buffer for storing the moving image data belonging to a chapter,

storage size detecting means for detecting that the moving image data stored in the buffer increases in size beyond a first size which is a size of a moving image object other than a final moving image object and then reaches a second size which is a size of a moving image object for a seamless connection,

final data detecting means for detecting that a final moving image data belonging to the chapter is stored in the buffer,

moving image object output means for retrieving a portion of the moving image data, stored in the buffer, corresponding to the first size from the head of the moving image data, multiplexing, as a moving image object, the retrieved portion of the moving image data and the audio data, and outputting the moving image object if it is detected the size of the moving image data stored in the buffer reaches the second size over the first size, and retrieving a whole moving image data stored in the buffer, multiplexing, as a moving image object, the retrieved moving image data and the audio data, and outputting the moving image object if it is detected that the final moving image data belonging to the chapter is stored in the buffer.

7. (Previously presented) A record control method of a record control apparatus having a buffer storing moving image data belonging to a chapter, comprising:

a step of encoding the moving image data and outputting successively the encoded moving image data to the buffer,

a step of detecting that the moving image data stored in the buffer increases in size beyond a first size which is a size of a moving image object other than a final moving image object and then reaches a second size which is a size of a moving image object for a seamless connection,

a step of retrieving a portion of the moving image data, stored in the buffer, corresponding to the first size from the head of the moving image data, and outputting the retrieved portion of the moving image data as the moving image object if it is detected that the size of the moving image data stored in the buffer reaches the second size over the first size,

a step of detecting that a final moving image data belonging to the chapter is stored in the buffer, and

a step of retrieving a whole moving image data stored in the buffer and outputting the retrieved whole moving image data as a moving image object if it is detected that the final moving image data belonging to the chapter is stored in the buffer.

8. (Previously presented) A record control method of a record control apparatus having a buffer storing moving image data belonging to a chapter, comprising:

a step of setting a first size of a moving image object as a standard size of the moving image object, and a second size of the moving image object as a lower limit value of the moving image object for seamless connection,

a step of encoding the moving image data and outputting successively the encoded moving image data to the buffer,

a step of detecting that the moving image data stored in the buffer increases in size beyond the first size which is a size of a moving image object other than a final moving image object and then reaches the second size which is a size of a moving image object for a seamless connection,

a step of retrieving a portion of the moving image data, stored in the buffer, corresponding to the first size from the head of the moving image data, and outputting the retrieved portion of the moving image data as the moving image object if it is detected that the size of the moving image data stored in the buffer reaches the second size over the first size,

a step of detecting that a final moving image data belonging to the chapter is stored in the buffer, and

a step of retrieving a whole moving image data stored in the buffer and outputting the retrieved whole moving image data as a moving image object if it is detected that the final moving image data belonging to the chapter is stored in the buffer.

9. (Previously presented) A computer program product for causing a computer to perform a record control method of a record control apparatus having a buffer storing moving image data belonging to a chapter, said computer program product stored on a computer readable medium and including program code for performing steps comprising:

a step of encoding the moving image data and outputting successively the encoded moving image data to the buffer,

a step of detecting that the moving image data stored in the buffer increases in size beyond a first size which is a size of a moving image object other than a final moving image object and then reaches a second size which is a size of a moving image object for a seamless connection,

a step of retrieving a portion of the moving image data, stored in the buffer, corresponding to the first size from the head of the moving image data, and outputting the retrieved portion of the moving image data as the moving image object if it is detected that the size of the moving image data stored in the buffer reaches the second size over the first size,

a step of detecting that a final moving image data belonging to the chapter is stored in the buffer, and

a step of retrieving a whole moving image data stored in the buffer and outputting the retrieved whole moving image data as a moving image object if it is detected that the final moving image data belonging to the chapter is stored in the buffer.

10. (Previously presented) A computer program product for causing a computer to perform a record control method of a record control apparatus having a buffer storing moving image data belonging to a chapter, said computer program product stored on a computer readable medium and including program code for performing steps comprising:

a step of setting a first size of the moving image object as a standard size of a moving image object, and a second size of the moving image object as a lower limit value of the moving image object for seamless connection,

a step of encoding the moving image data and outputting successively the encoded moving image data to the buffer,

a step of detecting that the moving image data stored in the buffer increases in size beyond the first size which is a size of a moving image object other than a final moving image object and then reaches the second size which is a size of a moving image object for a seamless connection,

a step of retrieving a portion of the moving image data, stored in the buffer, corresponding to the first size from the head of the moving image data, and outputting the retrieved portion of the moving image data as the moving image object if it is detected that the size of the moving image data stored in the buffer reaches the second size over the first size,

a step of detecting that a final moving image data belonging to the chapter is stored in the buffer, and

a step of retrieving a whole moving image data stored in the buffer and outputting the retrieved whole moving image data as a moving image object if it is detected that the final moving image data belonging to the chapter is stored in the buffer.